

# System Programming & OS 실습

## 2. Terminal and Yum

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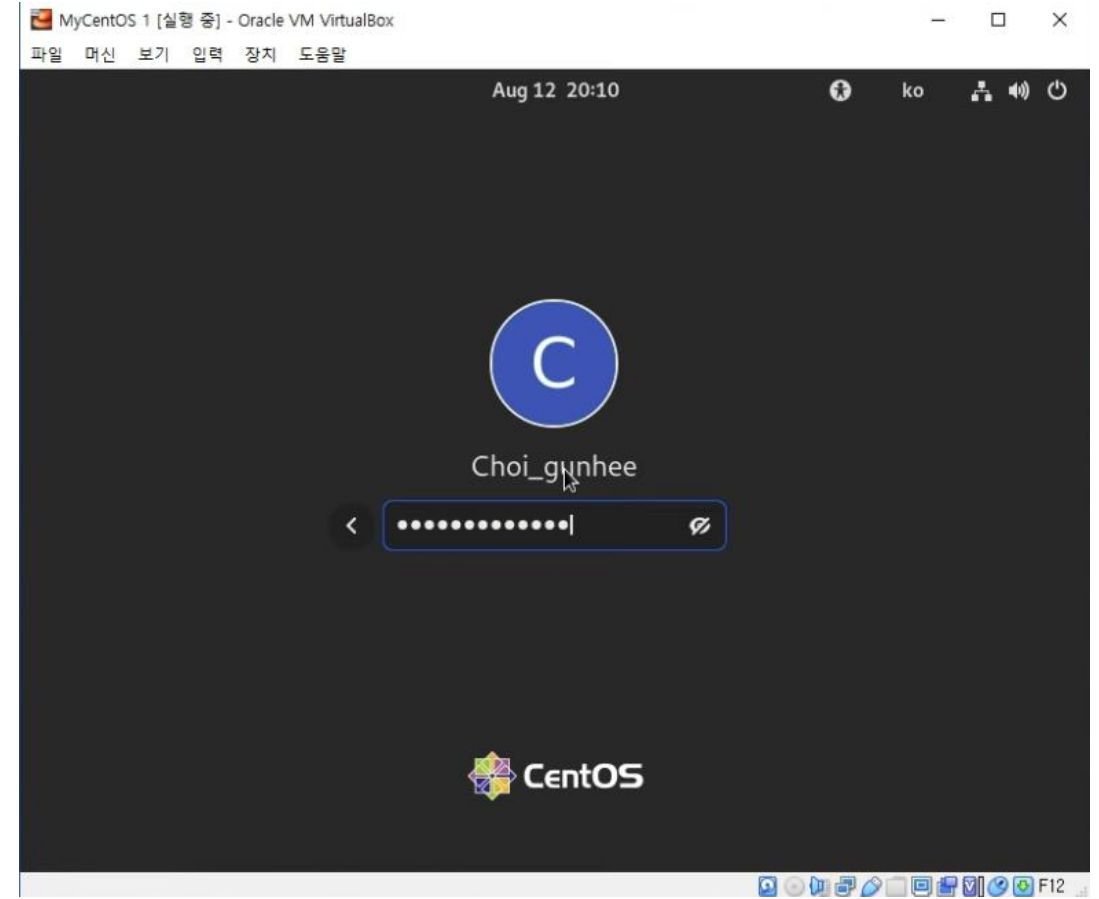
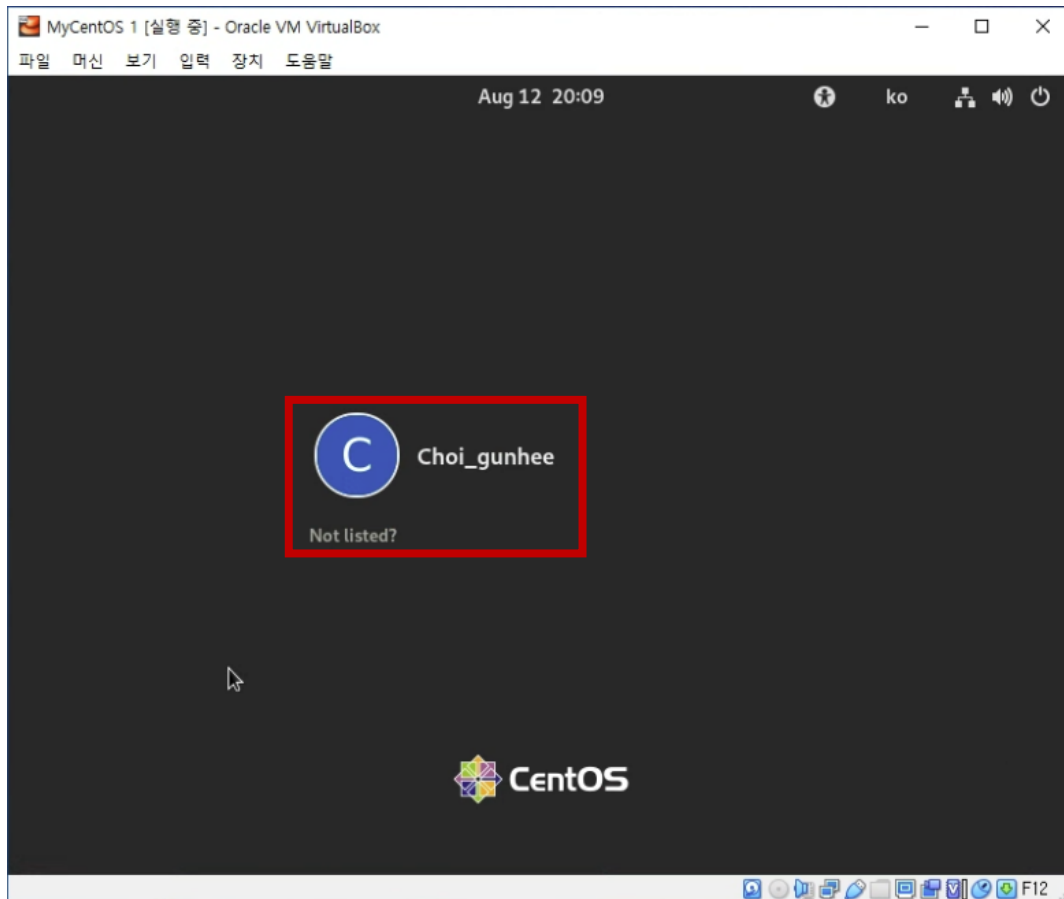
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- Terminal 접속
- 명령어 사용법
  - 기초 명령어
- Yum

# Terminal 접속

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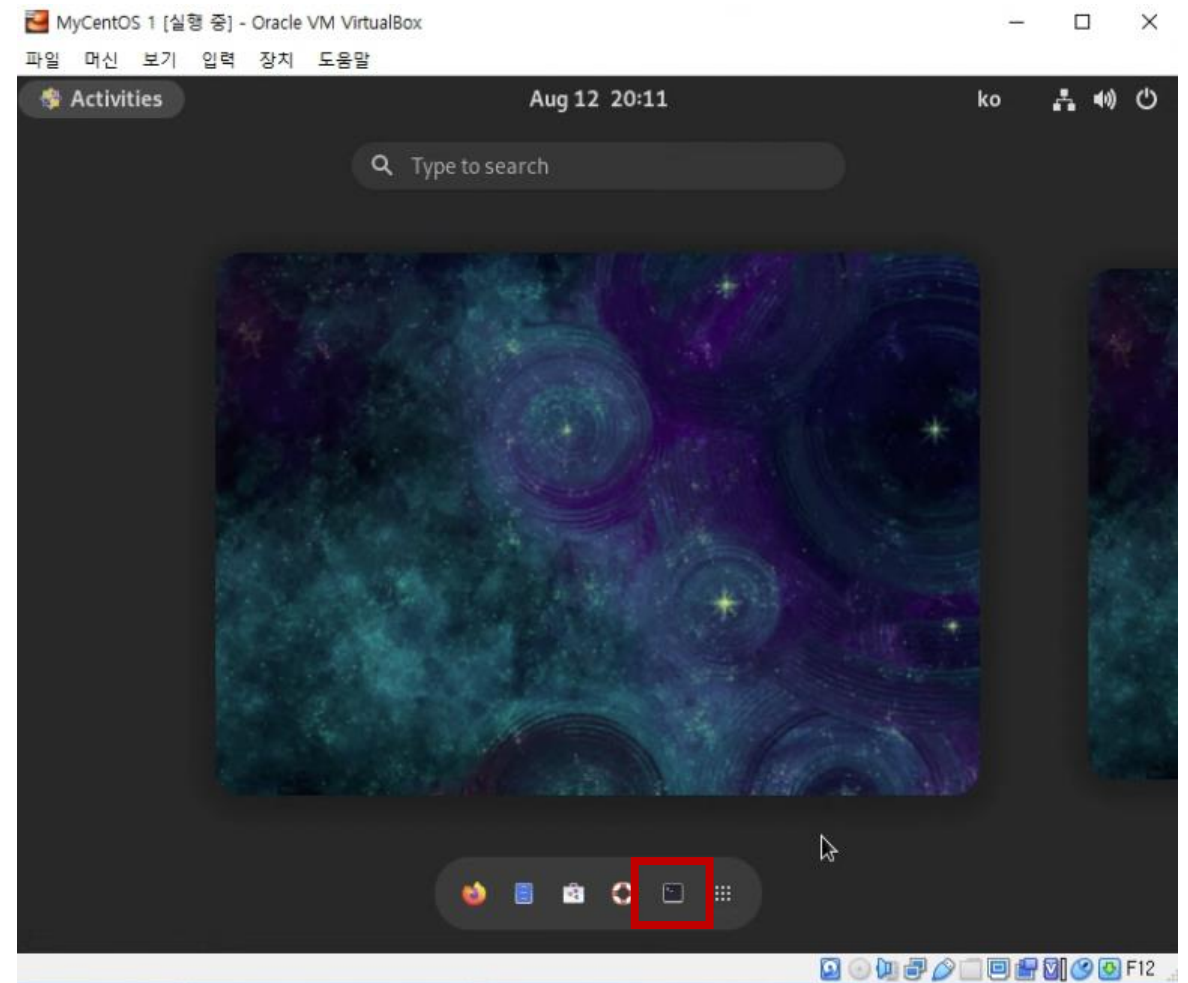
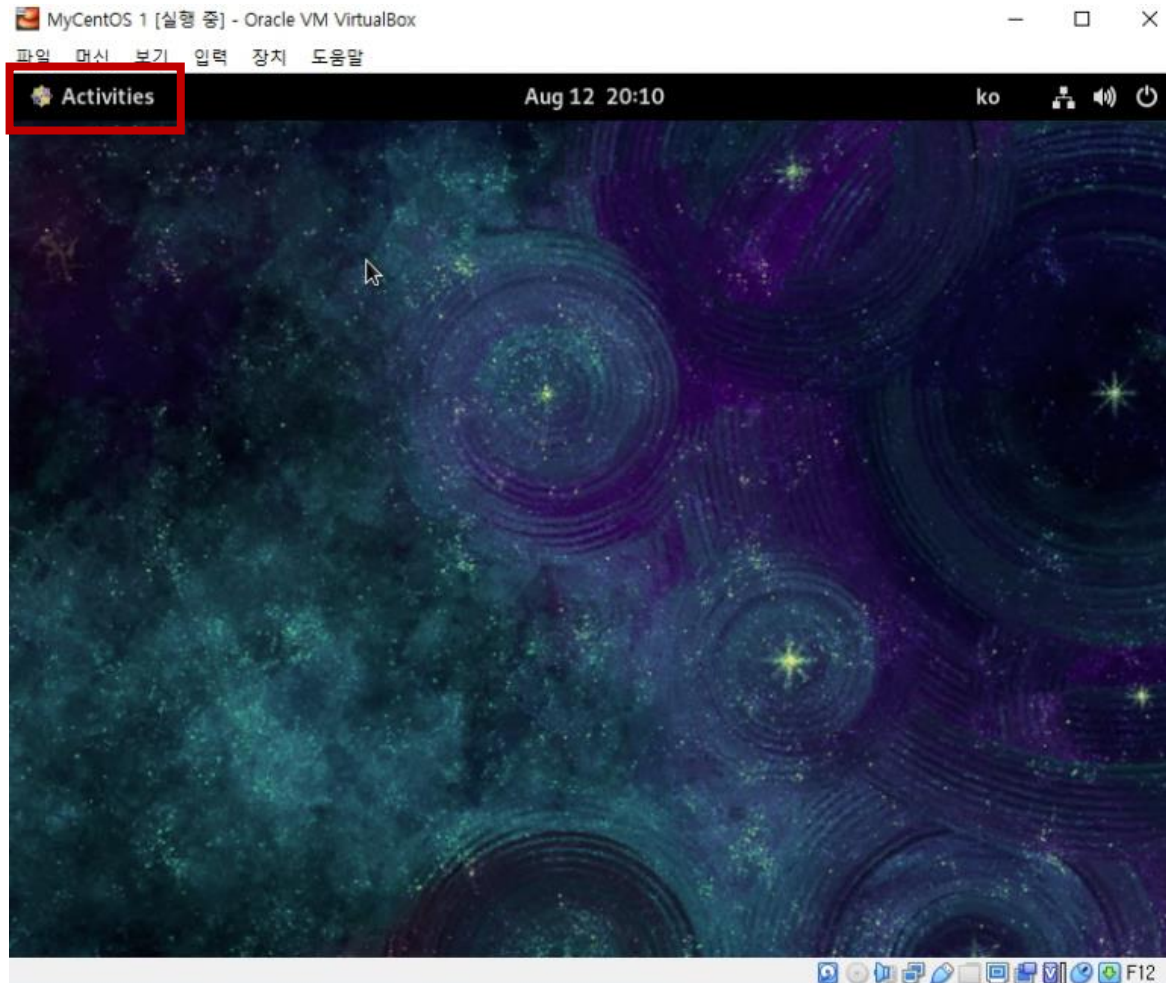
- CentOS 접속



# Terminal 접속

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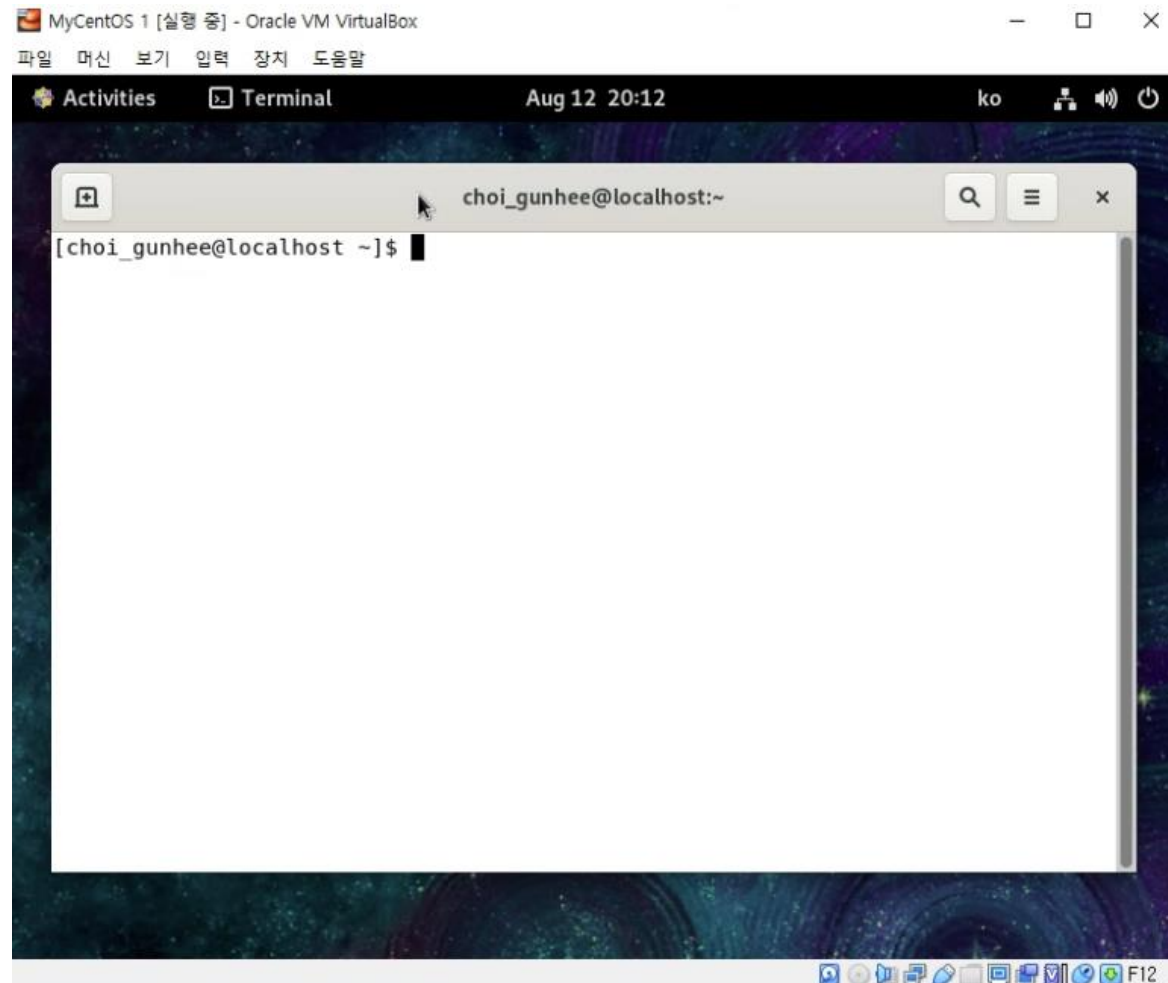
- Terminal 실행



# Terminal 접속

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- Terminal 실행



- 명령어의 구조

명령어	[옵션]	[인자]
-----	------	------

- 명령어 : 작업을 지시하는 프로그램 이름
  - 쉘 내장 명령과 유틸리티로 구분
  - 예 : ls, clear 등
- 옵션 : 각 명령어에 따른 세부 기능 선택
  - “-” 나 “--”로 시작하고 숫자, 문자를 사용
  - 예 : ls -l
- 인자 : 명령어에 전달되는 값
  - 예 : ls /tmp, ./a.out 10

# 명령어 사용법 - 기초 명령어

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- ls : 파일이나 디렉토리에 대한 정보 출력
  - 옵션
    - a : (All) 시스템의 숨겨진 파일을 포함한 모든 파일 출력
    - l : (Long) 파일의 상세 정보 출력

```
[choi_gunhee@localhost ~]$ ls
Desktop Documents Downloads Music Pictures Public Templates Videos
[choi_gunhee@localhost ~]$ ls -a
.          .bash_logout  .cache  Documents .mozilla  Public
..         .bash_profile .config Downloads Music      Templates
.bash_history .bashrc      Desktop .local    Pictures  Videos
[choi_gunhee@localhost ~]$ ls -l
total 0
drwxr-xr-x. 2 choi_gunhee choi_gunhee 6 Aug 12 15:39 Desktop
drwxr-xr-x. 2 choi_gunhee choi_gunhee 6 Aug 12 15:39 Documents
drwxr-xr-x. 2 choi_gunhee choi_gunhee 6 Aug 12 15:39 Downloads
drwxr-xr-x. 2 choi_gunhee choi_gunhee 6 Aug 12 15:39 Music
drwxr-xr-x. 2 choi_gunhee choi_gunhee 6 Aug 12 15:39 Pictures
drwxr-xr-x. 2 choi_gunhee choi_gunhee 6 Aug 12 15:39 Public
drwxr-xr-x. 2 choi_gunhee choi_gunhee 6 Aug 12 15:39 Templates
drwxr-xr-x. 2 choi_gunhee choi_gunhee 6 Aug 12 15:39 Videos
[choi_gunhee@localhost ~]$
```



- clear : 화면을 깨끗이 지우기

```
[choi_gunhee@localhost ~]$ ls
Desktop Documents Downloads Music Pictures Public Templates Videos
[choi_gunhee@localhost ~]$ ls -a
.          .bash_logout  .cache  Documents  .mozilla  Public
..         .bash_profile .config Downloads Music      Templates
.bash_history .bashrc      Desktop .local    Pictures  Videos
[choi_gunhee@localhost ~]$ ls -l
total 0
drwxr-xr-x. 2 choi_gunhee choi_gunhee 6 Aug 12 15:39 Desktop
drwxr-xr-x. 2 choi_gunhee choi_gunhee 6 Aug 12 15:39 D
drwxr-xr-x. 2 choi_gunhee choi_gunhee 6 Aug 12 15:39 D
drwxr-xr-x. 2 choi_gunhee choi_gunhee 6 Aug 12 15:39 M
drwxr-xr-x. 2 choi_gunhee choi_gunhee 6 Aug 12 15:39 P
drwxr-xr-x. 2 choi_gunhee choi_gunhee 6 Aug 12 15:39 P
drwxr-xr-x. 2 choi_gunhee choi_gunhee 6 Aug 12 15:39 T
drwxr-xr-x. 2 choi_gunhee choi_gunhee 6 Aug 12 15:39 V
[choi_gunhee@localhost ~]$ clear
```

```
[choi_gunhee@localhost ~]$
```



- date : 날짜와 시간을 출력

```
[choi_gunhee@localhost ~]$ date  
Sun Aug 14 07:05:24 PM KST 2022  
[choi_gunhee@localhost ~]$
```

- man : 명령에 대한 설명 출력
  - 종료는 q 입력

```
[choi_gunhee@localhost ~]$ man clear
```

```
clear(1)                                General Commands Manual                                clear(1)  
  
NAME  
    clear - clear the terminal screen  
  
SYNOPSIS  
    clear [-Ttype] [-V] [-x]  
  
DESCRIPTION  
    clear clears your screen if this is possible, including its scroll-  
back buffer (if the extended "E3" capability is defined).  clear  
looks in the environment for the terminal type given by the environ-  
ment variable TERM, and then in the terminfo database to determine  
how to clear the screen.  
  
    clear writes to the standard output.  You can redirect the standard  
output to a file (which prevents clear from actually clearing the  
screen), and later cat the file to the screen, clearing it at that  
point.  
  
OPTIONS  
    Manual page clear(1) line 1 (press h for help or q to quit)
```

- 명령행 편집 방법

- 문자 지우기

- 문자를 지울 때는 백스페이스 사용

- 단어 지우기

- Ctrl + W

```
[choi_gunhee@localhost ~]$ yum install █
```

```
[choi_gunhee@localhost ~]$ yum █
```

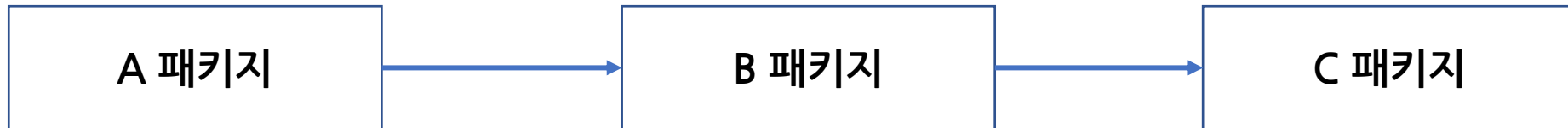
- 문장 지우기

- Ctrl + U

```
[choi_gunhee@localhost ~]$ yum install █
```

```
[choi_gunhee@localhost ~]$
```

- yum(Yellodog Update Modified)
  - 레드햇 계열의 리눅스 배포판에서 사용하는 프로그램(패키지) 설치 관리 도구
  - 패키지 의존성 문제를 자동으로 처리하면서 설치, 업데이트, 삭제를 진행
- 패키지 의존성 (package dependency)



- C 패키지를 설치 하기 위해서는, A와 B 패키지를 순서대로 설치 한 후에 설치가 가능하다.

- yum(Yellodog Update Modified)

yum

[옵션]

명령어

패키지명

- 패키지 list 확인

```
[choi_gunhee@localhost ~]$ yum list
```

xxhash-libs.x86_64	0.8.1-3.el9	appstream
xz-devel.i686	5.2.5-8.el9	appstream
xz-devel.x86_64	5.2.5-8.el9	appstream
xz-java.noarch	1.8-14.el9	appstream
xz-libs.i686	5.2.5-8.el9	baseos
xz-lzma-compat.x86_64	5.2.5-8.el9	appstream
yajl.i686	2.1.0-21.el9	appstream
yara.i686	4.2.1-4.el9	appstream
yara.x86_64	4.2.1-4.el9	appstream
yelp-libs.i686	2:40.3-2.el9	appstream
yum-utils.noarch	4.1.0-2.el9	baseos
zchunk-libs.i686	1.1.9-4.el9	baseos
zchunk-libs.x86_64	1.1.9-4.el9	baseos
zlib.i686	1.2.11-33.el9	baseos
zlib-devel.i686	1.2.11-33.el9	appstream
zlib-devel.x86_64	1.2.11-33.el9	appstream
zram-generator.x86_64	0.3.2-7.el9	appstream
zsh.x86_64	5.8-9.el9	baseos
zziplib.i686	0.13.71-9.el9	appstream
zziplib.x86_64	0.13.71-9.el9	appstream
zziplib-utils.x86_64	0.13.71-9.el9	appstream

```
[choi_gunhee@localhost ~]$
```

- yum(Yellodog Update Modified)

yum

[옵션]

명령어

패키지명

- 설치 가능한 패키지 리스트

```
[choi_gunhee@localhost ~]$ yum list updates
Last metadata expiration check: 1:21:55 ago on Sun 14 Aug 2022 07:48:59 PM KST
```

- 설치된 패키지 리스트

```
[choi_gunhee@localhost ~]$ yum list installed
yelp.x86_64                2:40.3-2.el9                @AppStream
yelp-libs.x86_64           2:40.3-2.el9                @AppStream
yelp-tools.noarch          40.0-3.el9                  @AppStream
yelp-xsl.noarch            40.2-1.el9                  @AppStream
yum.noarch                 4.12.0-3.el9                @anaconda
zenity.x86_64              3.32.0-8.el9                @AppStream
zip.x86_64                 3.0-33.el9                  @anaconda
zlib.x86_64                1.2.11-33.el9               @anaconda
zstd.x86_64                1.5.1-2.el9                 @anaconda
[choi_gunhee@localhost ~]$
```

- yum(Yellodog Update Modified)

- vim 설치

- 옵션 y : 사용자에게 yes/no 여부를 묻지 않고 넘어감

```
[choi_gunhee@localhost ~]$ yum -y install vim
```

```
Error: This command has to be run with superuser privileges (under the root user on most systems).
```

```
[choi_gunhee@localhost ~]$
```

- 위 에러는 vim 설치 시 root 권한이 필요하다는 것을 알려준다.

```
[choi_gunhee@localhost ~]$ sudo yum -y install vim
```

```
We trust you have received the usual lecture from the local System Administrator. It usually boils down to these three things:
```

- ```
#1) Respect the privacy of others.  
#2) Think before you type.  
#3) With great power comes great responsibility.
```

```
[sudo] password for choi_gunhee: █
```

```
[sudo] password for choi_gunhee:
```

```
Last metadata expiration check: 0:21:28 ago on Sun 14 Aug 2022 08:34:54 PM KST
```

```
.
```

```
Package vim-enhanced-2:8.2.2637-16.el9.x86_64 is already installed.
```

```
Dependencies resolved.
```

```
Nothing to do.
```

```
Complete!
```

```
[choi_gunhee@localhost ~]$
```

- yum(Yellodog Update Modified)
  - yum check-update : 업데이트 가능한 패키지 목록 확인

```
[choi_gunhee@localhost ~]$ yum check-update
Last metadata expiration check: 1:08:57 ago on Sun 14 Aug 2022 07:48:59 PM KST
.
```

- yum update 패키지명  
yum update

- 패키지명을 입력하면 해당 패키지 업데이트, 안한다면 모든 패키지 업데이트

```
[choi_gunhee@localhost ~]$ sudo yum update
Last metadata expiration check: 0:24:26 ago on Sun 14 Aug 2022 08:34:54 PM KST
.
Dependencies resolved.
Nothing to do.
Complete!
[choi_gunhee@localhost ~]$
```



- yum(Yellodog Update Modified)
  - yum remove 패키지명 : 해당 패키지를 삭제

```
[choi_gunhee@localhost ~]$ sudo yum remove vim
Dependencies resolved.
```

| Package                       | Arch   | Version           | Repository | Size  |
|-------------------------------|--------|-------------------|------------|-------|
| Removing:                     |        |                   |            |       |
| vim-enhanced                  | x86_64 | 2:8.2.2637-16.el9 | @AppStream | 3.8 M |
| Removing unused dependencies: |        |                   |            |       |
| gpm-libs                      | x86_64 | 1.20.7-29.el9     | @AppStream | 28 k  |
| vim-common                    | x86_64 | 2:8.2.2637-16.el9 | @AppStream | 30 M  |
| vim-filesystem                | noarch | 2:8.2.2637-16.el9 | @anaconda  | 40    |

## Transaction Summary

```
Remove 4 Packages
```

```
Freed space: 34 M
Is this ok [y/N]: █
```